

REMARKS

Claims 1-20 are all the claims presently pending in the application. In an effort to expedite prosecution, Appellants have decided to reopen prosecution with claim amendments rather than file a Request for Rehearing, so the Board may or may not wish to comment on Appellants' responses to the new rejections. For the record, Appellants respectfully respond to these new rejections, as follows.

The New Rejection Based on *Bilski* and *CyberSource*

Beginning on page 10 of the Decision, the Board found that claim 1 is directed to an abstract idea, based on the holding of *Bilski* and *CyberSource*.

Appellants respectfully disagree, since the facts of the present evaluation are clearly different from those of these two case holdings.

In both of these cases, the claim language included wording that could arguably be reasonably "... *performed in the human mind or by a human using a pen and paper*", as characterized in the Decision. However, claim 1 of the present invention cannot be similarly performed by either the human mind or a human using a pen and paper, for the following reason.

The first limitation clearly requires that a range query be decomposed into one or more virtual constructs. Appellants point out that such activity is possible only inside the operational space of a computer executing the present invention, since the entity "range query" and the entity "virtual construct" are merely abstractions for the human mind. That is, a human mind can reasonably think about the concept of decomposing a range query and can possibly conjure up mechanisms to achieve this task, such as the technique described in the present invention, but the human mind does not at this stage of human evolution have any capability to interact with a "range query" *per se*, let alone decompose a range query using "virtual constructs" *per se*, as these terms are used in the claim and described in the specification. These are entities that clearly have a reality only inside the computer application program.

Similarly, a human using a pen and paper can, at best, merely draw representations of these entities, similar to the figures of the present application that describes the operation of the present invention. However, these representations are not real entities, as described in the

specification. In contrast, the present invention describes a machine-implemented mechanism that actually does perform these acts described in the limitations of claim 1.

The Board's new rejection incorrectly presumes that "thinking about" the operation described in the first claim limitation, or "representing" the objects using a pen and paper somehow "performs" the claimed act of decomposing a range query using virtual constructs when, in fact, there is no actual performance of this act by mere mental activity or visual representation of the mechanism that is being executed by a computer in the present invention.

That is, making an exemplary analogy of the act of "chopping wood", one does not perform this act by merely thinking mentally about performing the act of chopping wood, nor would one perform this act by drawing a visual representation on paper using a pen. Indeed, one would not even perform this act by simulating the acts of chopping wood, such as might be done by a mime simulating the act of swinging an axe overhead and "chopping" a chair intended as "wood" being chopped.

Rather, clearly one performs "chopping wood" only if the act is executed by a person or agent using an appropriate tool, such as an axe, and only if there is a piece of wood being acted upon by a person/agent capable of appropriately using that chopping tool.

Therefore, the facts underlying the conclusions in *Bilski* and in *CyberSource* are not present in the present evaluation, since the act described in claim 1 cannot actually be performed either mentally or by drawing representations on paper. Neither thinking about decomposing a range query nor drawing the figures provided in the present application actually achieves the act of actually "decomposing" an actual entity that is referred to in the present application as a "range query." Performance of this act is possible only within the operational space of the computer program that has been programmed to receive an object defined as being a "range query", using objects defined within the program as being "virtual constructs", as clearly described in claim 1.

Thus, the wording of the claimed invention differs from the wording of the claims in both *Bilski* and in *CyberSource*. Indeed, from the above analogy with "chopping wood", since the act described in claim 1 cannot be actually performed mentally or with pen and paper representation, the wording of the claimed invention clearly falls within the exception noted in the Decision that the Federal Circuit "... *does 'not presume to define 'abstract' beyond the recognition that this disqualifying characteristic should exhibit itself so manifestly as to override the broad statutory*

categories of eligible subject matter and the statutory context that directs primary attention on the patentability criteria of the rest of the Patent Act.”’ Ultramercial, LLC v. Hulu, LLC, 657 F.3d 1323, 1327 (Fed. Cir. 2011) (citing Research Corp. Tech., Inc. v. Microsoft Corp., 627 F.3d 859, 868 (Fed. Cir. 2010)).

The New Rejection Based on “Any Method”

Next, on the top of page 11 of the Decision, the Board concludes that:

“... the broad scope of claim 1 extends to essentially any method of performing the claimed steps. Id. For example, claim 1 is broad enough to be met by a customer service representative that is tasked with watching stock prices and mentally correlating the fluctuations of those stock prices to the requests of certain clients. Thus, each of the steps in claim 1, i.e., decomposing a range query, building a query index, and matching an event against the index, can all be carried out in the human mind without the use of a special purpose computer.”

Appellants again respectfully disagree.

If a customer service rep is watching stock prices fluctuate for purpose of comparison with a customer’s range query, then that customer service rep would never reasonably decompose the range query and would never reasonably develop an index based on virtual constructs. Rather, the customer service rep would clearly consider only the limiting boundaries of the range query and would have no reason to decompose the range query, let alone develop an index of virtual constructs. That is, this customer service rep would be interested only in determining whether a stock value fell within the limits of the range query and would not even consider decomposing the range query using virtual constructs, since such decomposition would have no benefit to the process of determining whether a specific stock has entered into the range defined by the customer’s query.

The New Rejection Based on “Preemption”

In the middle of page 11 of the Decision the Board concludes:

“Furthermore, claim 1 would allow Appellants to preempt the use of this approach in all fields, and would effectively grant a monopoly over an abstract idea.”

Again, Appellants respectfully disagree.

The claimed invention clearly limits “this approach” to “... monitoring continual range queries against events.” There is no preemption, since the cited references, as well as the background description of the specification, clearly describe that other mechanism are readily available for achieving this result. Therefore, since “this approach” is clearly limited to the specific application of monitoring continual range queries against events and since there are clearly other mechanisms available for monitoring continual range queries against events, the claimed invention clearly falls within scenario described by Board itself in their analysis:

“... c.f. Research Corp., 627 F.3d at 869 (noting that inventions with specific applications or improvements to technologies in the marketplace are not likely to be so abstract that they override the statutory language and framework of the Patent Act).”

If there is an “abstract idea” in independent claim 1 at all, it would have to be “... method for monitoring continual range queries against events....” The claim limitations clearly define a precise (and novel) mechanism for performing/achieving this abstract idea that is new in the art, and cannot reasonably be considered as themselves as constituting an “abstract idea” because of the precise definition inherent in the new mechanism and because other mechanisms can be used to perform the abstract idea set out in the preamble, as clearly demonstrated by the prior art evaluation and by the discussion the background of the specification itself. Therefore, Appellants respectfully submit that there is clearly no abstract idea being defined by the present invention and clearly no preemption.

The New Rejection Based on “Signals, *per se*”

Near the middle of page 12 of the Decision the Board concludes:

“Claim 15 is directed to a signal-bearing medium. As stated in the Specification, Appellants’ signal bearing media includes digital and analog communication links and wireless signals. (FF 1.) These types of signal bearing media encompass transitory signals. Accordingly, claim 15 is not constrained to a tangible, non-transitory medium and could encompass non-statutory subject matter, such as transitory, propagating signals. See In re Nuijten, 500 F.3d 1346, 1353-54 (Fed. Cir. 2007) (holding that transitory, propagating signals are not patentable subject matter under §101). Thus, we agree with the Examiner that Appellants’ claim 15 recites non-statutory subject matter.”

Appellants again respectfully disagree.

First, it is noted that the facts underlying the holding of *Nuijten* are distinguished from

claim 15, since the rejected claims of *Nuijten* were expressly directed to a signal, *per se*. Claim 15 does not recite a “signal” and the specification makes no suggestion that a signal is equivalent to “signal bearing media”, contrary to characterization by the Board.

Second, the description in line 17 of page 18 through line 6 of page 19 clearly refers to storage of instructions. Signals, *per se*, cannot themselves store instructions, using any conventional technology. The reference to “... digital and analog communication links and wireless” is merely directed to memory devices used for storage of instructions in these communication links and wireless scenarios and does not imply that signals can be used for storage of instructions.

Therefore, Appellants respectfully submit that there are no claims of the claimed invention that reasonably can be rejected under the facts of the holding of *Nuijten*.

Conclusion

Although Appellants do not agree with the evaluation of the Board for the new rejections, Appellants have decided to simply further clarify claim language, to expedite prosecution. Appellants believe that the amendments above appropriately address all open issues discussed in the Decision on Appeal mailed on December 20, 2011, including the new grounds of rejection, and the Board is respectfully requested to remand this Amendment to the Examiner with a holding that these claim amendments are satisfactory to overcome all of the new rejections.

It is noted that Appellants specifically state that no amendment to any claim herein should be construed as a disclaimer of any interest in or right to an equivalent of any element or feature of the amended claim.

In view of the foregoing, Appellants submit that claims 1-20, all the claims presently pending in the application, are patentably distinct over the prior art of record and are in condition for allowance. The Board/Examiner are respectfully requested to pass the above application to issue at the earliest possible time.

Should the Board/Examiner find the application to be other than in condition for allowance, the Examiner is requested to contact the undersigned at the local telephone number listed below to discuss any other changes deemed necessary in a telephonic or personal interview.

Serial No. 10/671,938
Docket No. YOR920030165US1 (YOR.460)

The Commissioner is hereby authorized to charge any deficiency in fees or to credit any overpayment in fees to Assignee's Deposit Account No. 50-0510.

Respectfully Submitted,



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